

**From:** [Hagerman, Paul](#)  
**To:** [Sivak, Michael](#); [Mitchell, Tanya](#); [Amy Darpinian](#)  
**Cc:** [Sy, William](#)  
**Subject:** RE: Rolling Knolls - minimum sampling volumes  
**Date:** Friday, December 12, 2014 12:27:57 PM

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Michael – that is correct, that the volume reported to us. Ricky spoke with them on Thursday, and they suggested that they needed to confirm if that volume they reported to us is correct and they are checking with their staff person who prepared the PDBs.

If the volumes provided to us are below the volumes listed, yes data quality will be affected as it does effect the detection limit. If something happens in the lab (e.g. need to dilute, reanalyze because of instrument or calibration) the lab will not have enough volume to do this. This will cause the results to be qualified or rejected. If the bottle breaks or something during shipment, than we have no results. This last one is worst case.

CLP strict controls on QC with minimal volumes will restrict the lab's ability to meet the QC requirements. In addition, if there not enough volume to reanalyze when needed for corrective action due to results outside the required ranges, or due to container breakage etc results will also be qualified.

Paul Hagerman, P.E.

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**From:** Sivak, Michael [<mailto:Sivak.Michael@epa.gov>]

**Sent:** Thursday, December 11, 2014 3:19 PM

**To:** Hagerman, Paul; Mitchell, Tanya; Amy Darpinian

**Cc:** Sy, William

**Subject:** RE: Rolling Knolls - minimum sampling volumes

Paul,

I believe ARCADIS indicated that the passive diffusion bags collect about 200 – 300 mls of samples – Ricky from CDM was on the call and can verify this. Would that mean that the detection limits that are necessary for the project cannot be met with this sampling protocol? If we need 1L for metals and 500 mls for cyanide, but we only have 200 – 300 mls from the sampler, what does this mean?

Michael Sivak

212.637.4310

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**From:** Hagerman, Paul [<mailto:HagermanPR@cdmsmith.com>]

**Sent:** Thursday, December 11, 2014 1:22 PM

**To:** Mitchell, Tanya; Amy Darpinian

**Cc:** Sivak, Michael; Sy, William

**Subject:** RE: Rolling Knolls - minimum sampling volumes

*Below is the minimum volume that we can supply to the CLP laboratory.*

*VOC – 1 HCL preserved vial – 40 ml*

*Metals and Mercury – 1 HNO<sub>3</sub> preserved poly – 500 ml*

*Dissolved Metals and Mercury – 1 HNO<sub>3</sub> preserved poly – 500 ml*

*SVOC – 1 amber unpreserved – 1 L*

*Pesticides - 1 amber unpreserved – 1 L*

*PCBs - 1 amber unpreserved – 1 L*

*Cyanide - 1 NaOH preserved poly – 500 ml*

*If there are no issues with the analyses at these minimum levels of volumes provided, then we will achieve standard reporting limits.*

Paul Hagerman, P.E.

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**From:** Mitchell, Tanya [<mailto:Mitchell.Tanya@epa.gov>]

**Sent:** Tuesday, December 09, 2014 3:21 PM

**To:** Amy Darpinian; Hagerman, Paul

**Cc:** Sivak, Michael; Sy, William

**Subject:** Rolling Knolls

Hi Amy,

Please have CDM contact the CLP representative to determine the minimum volume that can be provided for VOCs, and TAL metals plus cyanide for the pore water samples. It appears that spilt samples were provided but, CDM is concerned that there is not going to be enough volume. Please review the QAPP volumes and the response from the CLP representative to determine if there will be enough volume for the VOCs and metals.

If you have any questions please contact Michael.

Thanks,

Tanya